PRM28

PREVALENCE OF THYROID DISORDERS AND NEED FOR UNIVERSAL SCREENING OF THYROID DYSFUNCTION IN PREGNANT WOMEN: A META-ANALYSIS

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OBJECTIVES: Thyroid dysfunction is the second most common endocrinopathy affecting women of childbearing age. Many studies have recommended that thyroid function screening should be routinely performed in all pregnant women. The aim of the present study was to determine the prevalence of thyroid disorders during pregnancy and to evaluate efficiency of the universal screening strategy versus case-finding strategy for diagnosing thyroid dysfunctions. **METHODS:** Comprehensive literature search was done in PubMed and EMBASE databases till July 2012 for studies related to prevalence and screening of thyroid dysfunction. For prevalence, the primary estimate was weighed mean pooled prevalence (%) with 95% CI. For screening, the primary estimate was pooled odds ratio (OR) with 95% CI. Heterogeneity was assessed by I^2 statistics. Publication bias was assessed using Begg and Egger test. Sensitivity analysis was also performed. **RESULTS:** A total of 33 studies (1988- 2012) for prevalence and 5 (2007- 2011) for screening were found to be pertinent. Because of significant heterogeneity, a random effects model was chosen. Combined analysis of weighed pooled prevalence of 19 studies of Thyroid Auto Immunity found 9.7% (9.5-10), 21 studies of hypothyroidism found 3.7% (2.2-6.1) and 10 studies of hyperthyroidism found 2.2% (1.0-4.5), 7 studies of overt/ clinical hypothyroidism found 2% (0.8-5.1), 13 studies of subclinical hypothyroidism found 3.7% (3-4.7), 6 studies of hypothyroxinemia found 3.4% (1.2-9.8), 4 studies of overt/ clinical hyperthyroidism found 0.6% (0.3-1.4) and 5 studies of subclinical hyperthyroidism found 0.022 (1.6-2.9). For the effectiveness of universal screening pooled OR was found to be 2.87 (1.60-4.94, P-<0.001). **CONCLUSIONS:** Our analysis supports the hypothesis of higher prevalence of thyroid dysfunction in pregnancy especially, hypothyroidism. The universal screening strategy is found to be more effective as the case-finding strategy fails to detect the majority of pregnant women with thyroid dysfunction.

PRM29

CHALLENGES IN ASSESSING THE IMPACT OF HYPONATREMIA MANAGEMENT ON LENGTH OF STAY: INTERIM RESULTS FROM A GLOBAL, MULTI-CENTER, PROSPECTIVE, OBSERVATIONAL REGISTRY OF HOSPITALIZED HYPERVOLEMIC AND EUVOLEMIC HYPONATREMIC PATIENTS

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OBJECTIVES: Hyponatremia (HN) is the most common electrolyte abnormality in hospitalized patients. Because of the methodological difficulties, little is known regarding the impact and management of HN on patient outcomes and health care resource usage. The HN Registry is a novel prospective effort to document the clinical management and health care outcomes of HN. **METHODS:** After informed consent or waiver, data were extracted from medical charts of patients enrolled in the HN registry. HN was defined as a serum sodium ≤ 130 mmol/L. Data from these eligible patients are summarized by sample size (n) and percentage (%) for categorical data, and mean and standard deviation for continuous data. Since there is no universal definition, length of stay (LOS) was calculated in several ways including LOS from date of HN identification (LOS 1), LOS from date of HN treatment initiation (LOS 2), and LOS limited to cases where treatment started within 2 days of HN identification (LOS 3). **RESULTS:** A total of 3795 of the 4909 patients enrolled at 253 (US=160, EU=93) sites between Sept 2010 and January 2013 had sufficient data for analysis. For fluid restriction, LOS 1=8.1±8.4, LOS 2=7.4±8.9, LOS 3=7.4±9.0. For pharmacological therapy, LOS 1=8.7±8.9, LOS 2=7.1±8.2, LOS 7.4±6.9. For hypertonic saline, LOS 1=7.0±7.3, LOS 2=6.1±6.0, LOS 3=3.7±2.2, LOS 4=6.3±6.3. **CONCLUSIONS:** Our analysis shows a considerable of LOS variability by HN management and LOS definition. By correcting the analysis for baseline factors and outliers, the effect of HN management on LOS may become clearer.

PRM30

OPTIMIZING REAL WORLD DATA COLLECTION FOR COMPARATIVE EFFECTIVENESS AND MARKET ACCESS

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OBJECTIVES: Real world data studies provide a level of granularity that may be not be available in randomized clinical trials (RCTs) that have strict inclusive exclusion criteria and may lead to weak external validity. Furthermore, RCTs generally do not capture important information on adherence, costs and rare side effects. The purpose of this study is to understand how to design patient registries and other observational studies to optimize their use to support market access decisions. **METHODS:** First, secondary research was conducted by analysing existing registries in a given therapeutic area in European markets including Belgium, Denmark, France, Germany, Italy, Poland, Spain, Sweden and the UK. Data points from existing registries were charted from 'most' to 'least prevalent'. Missing attributes that were perceived as essential based on expert opinion were also collected, identifying gaps in available data. Second, an international payer panel completed a quantitative survey and completed primary in depth interviews to understand the relative impact of all the registry attributes, including those that were perceived as gaps. This included impact on price, reimbursement status and formulary listing. Transferability of data was also tested to identify whether payers would accept data from other markets and determine what should be collected to maximise market access. **RESULTS:** Data gaps were cross referenced with the payer needs to understand which endpoints are not currently being addressed. This allowed an accurate map of critical endpoints needed to have the greatest impact on market access. **CONCLUSIONS:** In an era of evidence based medicine and constrained budgets, drug manufacturers need to identify how to best utilise real world data and patient registries. Using this methodology, it is possible to identify what data to collect and where it should be collected in order to maximise the market access opportunity and pricing potential.

RESEARCH ON METHODS – Cost Methods

PRM31

COMPARISON OF INFORMAL CARE TIME AND COSTS IN DIFFERENT AGE-RELATED DEMENTIAS: A REVIEW

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OBJECTIVES: Age-related dementia is a progressive degenerative brain syndrome whose prevalence increases with age. Alzheimer disease (AD), Parkinson disease (PD), Vascular Dementia (VD) are the most common age-related dementias. Dementias cause a substantial burden on society and on families who provide informal care. This study aims to review the relevant papers to compare informal care time and costs in different age-related dementias. **METHODS:** A systematic bibliographic search was performed on an international medical literature database (MEDLINE). All studies which assessed the social economic burden of different dementias were selected. Informal care time and costs were analyzed by disease stages and in three care settings, at home, in institution and without care setting distinction. **RESULTS:** 21 studies met our criteria. Depending on studies, informal costs vary from $1,364 to $44,736 in AD patients at home and from $1,563 to $5,386 in PD patients at home. Informal care time vary from 11,59h to 139,30h per week for AD patient at home and from 10,00h to 22,00h per week for PD patients at home. For informal care time and costs in institution only papers on AD were available. The annual informal costs vary from $416 to $5,542 and informal care time varies from 3.02h to 17.25h per week. For patients without distinction of care setting, annual informal costs varies from $1,831to $11,251 for AD and informal care time from 12,29h to 66,55h per week. Mean informal care time per week for patient at home was 55.73 h in AD and 15.8 h in PD (p=0.0076) and the associated mean annual informal costs were $17,492 versus $3,284, respectively (p=0.0393). **CONCLUSIONS:** There is a lack of data about informal care time and costs among other dementias than AD or PD. Globally, AD is most costly in terms of informal care costs than PD.

PRM32

TRENDS IN THE COST AND CHARGES FOR A HOSPITAL ADMISSION FOR ACUTE ISCHEMIC STROKE (AIS) IN THE UNITED STATES: DO THE TRENDS TRACK WITH THE CONSUMER PRICE INDEX (CPI) FOR MEDICAL CARE SERVICES?

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OBJECTIVES: The use of effective but high cost interventions and improved survival may affect the cost of a hospital admission. Thus, hospital costs for AIS may be expected to increase more than the average cost of medical care, as measured by the CPI, as the mix of cases change. The purpose of the study was to compare the actual trends in costs and charges for hospital admissions for AIS with the CPI, both overall and by use of tPA and mechanical thrombectomy (MT). **METHODS:** A total of 499,661 hospital admissions for AIS were extracted from the Nationwide Inpatient Sample (NIS), Healthcare Cost and Utilization Project (HCUP) data for 2005-2010. Cost per admission was estimated from total charges using each hospital's cost-to-charge ratio and were compared with CPI trends in changes in health care costs provided by the US Bureau of Labor and Statistics. Use of tPA and/or MT was examined using multiple regression analyses. **RESULTS:** Cost of an acute care admission for AIS increased at a greater rate, annually, than the CPI from 2005 through 2008, but appeared to level of in 2009, with tPA admission most closely following the CPI. Utilization of tPA increased in 2005 from 1.84% to 5.47% in 2010. The number of admissions with MT increased from 0.87% to 8.09% over the same time period. Charges for AIS admissions have increased much more rapidly than the CPI observed from 2005 to 2010, with admissions receiving tPA having the greatest gain in charges. **CONCLUSIONS:** Cost of care for AIS patients who receive tPA follows the CPI trend, while costs for non-tPA patients increase at a greater rate. This disparity could indicate a widening gap between cost and reimbursement for non-tPA admissions, and/or a failure of many hospitals to accurately record the use of tPA for billing purposes.

PRM33

REVIEW OF COST-UTILITY ANALYSES IN ASIA

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OBJECTIVES: To review published cost-utility analyses (CUA) targeted towards Asian populations and to understand the cost-effectiveness of the interventions studied. **METHODS:** We used the Tufts Medical Center Cost-Effectiveness Analysis Registry (www.cearegisty.org) to identify English-language CUAs pertaining to Asian countries published from 2000-2011. We examined prevention stage, type of interventions, and disease areas associated with "favorable" ratios, which we defined ratios less than the median of all incremental cost-effectiveness ratios (ICERs, expressed as $US2011 per QALY) in Asian CUAs. **RESULTS:** Of 2,717 CUAs published during 2000-2011, 109 (4.0%) pertained to Asian countries: Japan (n=43), Taiwan (n=23), China (n=11),